RETURN TO SERVICE PROCEDURE TABLE OF CONTENTS
RETURN TO CD-ROM TABLE OF CONTENTS

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Field Service Procedure

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NM6000
Low Flow Wizard Installation

RETURN TO SERVICE PROCEDURE TABLE OF CONTENTS
RETURN TO CD-ROM TABLE OF CONTENTS

NM6000 Low Flow Wizard Installation

Installation Procedure

CAUTION: This procedure applies only to machines with software version 1.06, 1.07, 2.00 and 2.05. If the software version is at 1.04, a 1.06 upgrade kit (P/N 4116278) must first be installed. If the software version is at 2.06, go to Section 2.

1.0 Installing the Low Flow Wizard:

1.1 Turn the System Power switch to ON and allow the machine to proceed through its start-up sequence.

1.2 Touch the Setup key at the bottom of the screen to display the Setup notebook. Then touch the About tab to display the About page of the setup notebook as shown in Figure 1.

1.3 Enter the Service mode by touching the following keys in this order:

- Volume Pressure Oxygen
- Gas Analysis
- NM6000
- Strip Chart Recorder

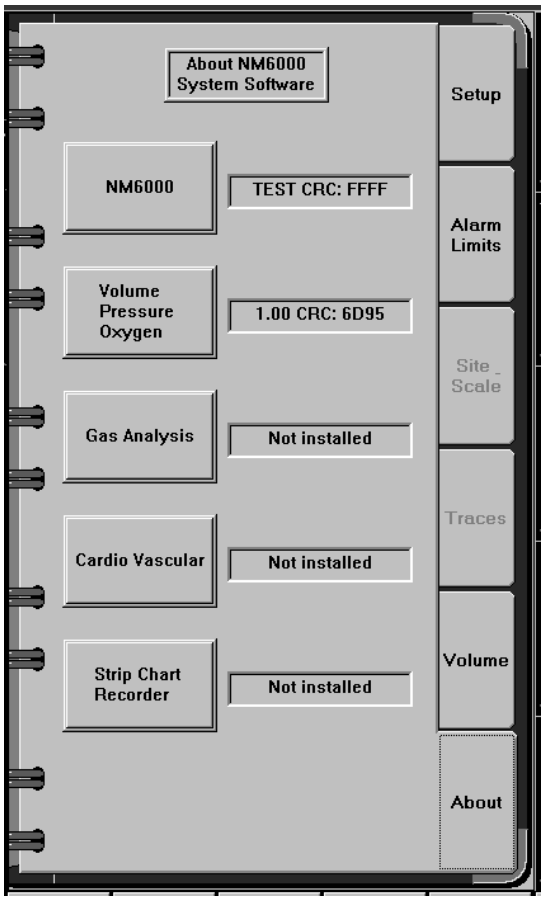

FIGURE 1. Setup Notebook About Page

1.4 Touch OK at the Service Mode dialog box.

1.5 Touch the NM6000 tab of the System 1 service folder.

1.6 Touch the Service Config key.

1.7 Touch the SERVICE key.

Installation Procedure (continued)

1.8 Enter your Technical Service Representative ID, then touch OK.

1.9 Touch the To Primary Keys key.

1.10 Touch the Setup key and select the About page.

1.11 Touch NM6000 twice, and then Strip Chart Recorder, Cardio Vascular, Gas Analysis, Volume Pressure Oxygen.

1.12 Touch the To Secondary Keys key, then touch the Service Config key.

1.13 Touch the Options tab to display the Software Options page shown in Figure 2.

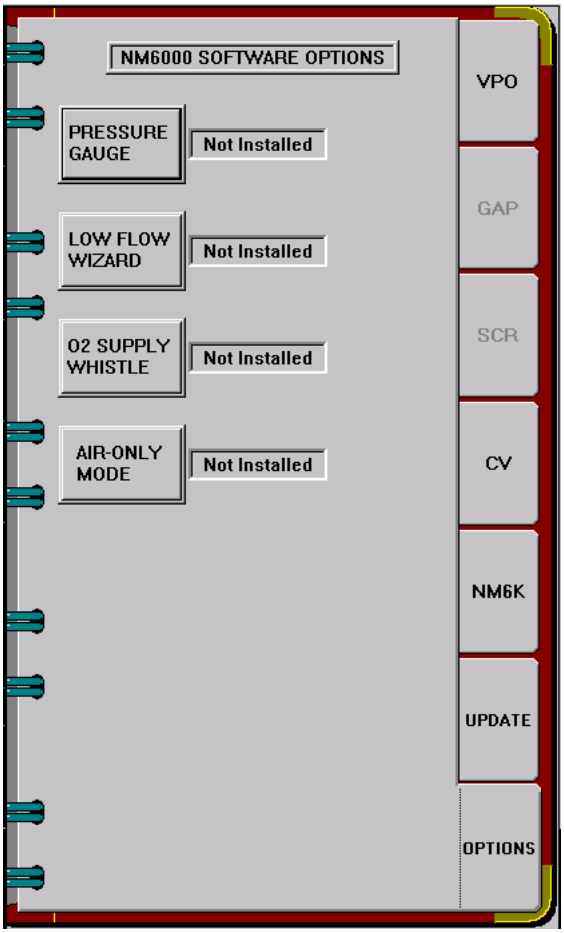

FIGURE 2. Software Options Page

1.14 Touch the LOW FLOW WIZARD key to install this option.

1.15 Touch the Exit Service key, then touch the OK key on the System 1 manager screen.

Testing the Low Flow Wizard:

1.16 Connect a test lung to the Y-piece and set the ventilator to Volume Mode.

1.17 Touch To Secondary Keys on the main screen taskbar.

1.18 Touch the Low Flow Wizard key on the taskbar. Verify that the low flow wizard window shown in Figure 3 appears in the lower right corner of the waveform area.

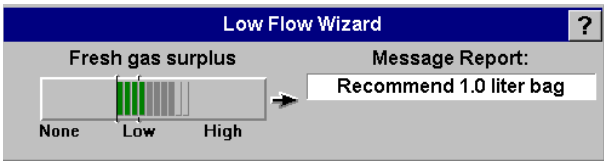

FIGURE 3. Low Flow Wizard Window

1.19 Touch the Low Flow Wizard key again to turn off the low flow wizard window.

Testing the Air-Only Option (If Applicable)

1.20 Calibrate the O2 sensor.

1.21 Touch the To Secondary Keys key on the main screen taskbar.

1.22 Touch the Air-Only Mode key, and then touch the Continue key on the Enable Air-Only Mode dialog box.

Installation Procedure (continued)

1.23 Verify that the N2O and minimum O2 flow is disabled and that the O2 low alarm is reduced to 18%.

1.24 Touch the N2O/Air/O2 key. Touch the Continue key on the Enable N2O/Air/O2 dialog, and verify that the N2O, minimum O2 flow, and %O2 low alarms are returned to their previous settings.

Installing the Label:

1.25 Attach the "Low Flow Wizard Enabled" label above the serial number label at the back of the machine where shown in Figure 4.

Updating the Operator's Manual Binder:

1.26 Insert the Low Flow Wizard operator's manual supplement P/N 4116901 in the Operator's Manual binder behind the Operator's Instruction Manual.

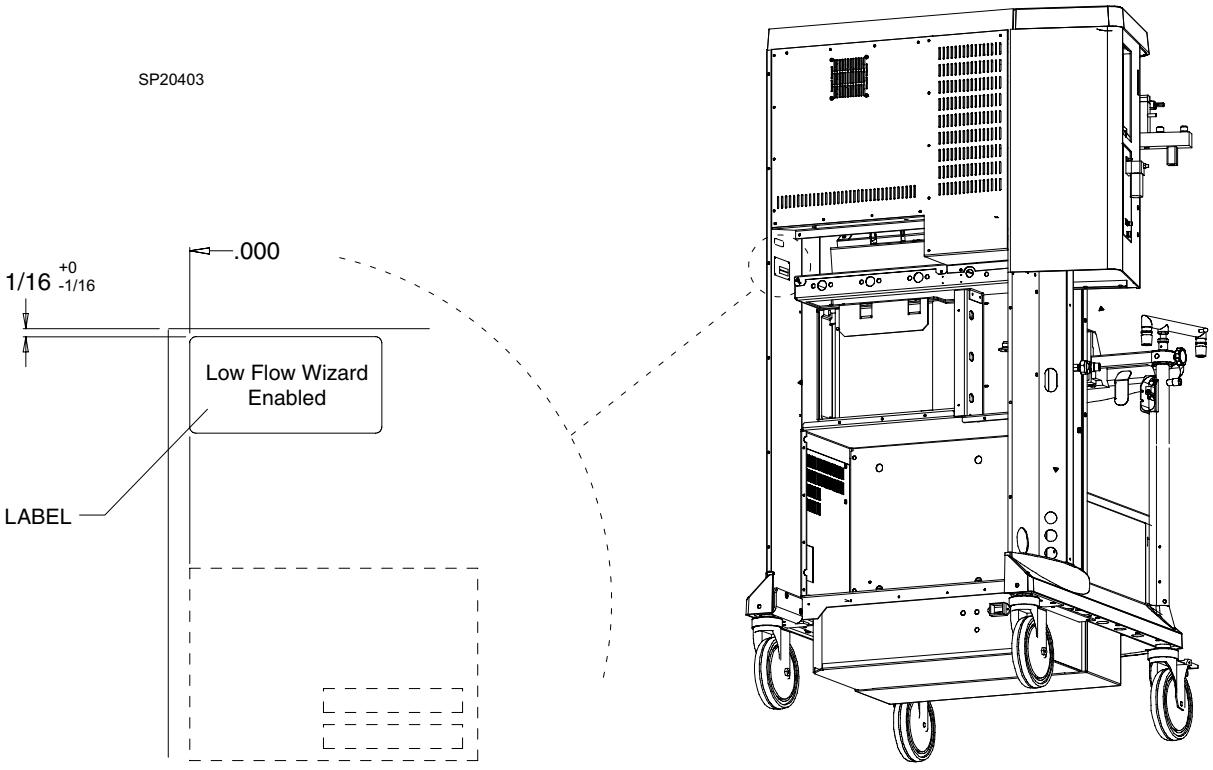

FIGURE 4. Location of Label

Installation Procedure (continued)

2.0 Keylok Option Installation for Machine Software Version 2.06

2.1 Turn the System Power switch to STANDBY.

2.2 Remove AC power from the machine. Wait at least 3.5 minutes, then pull all circuit breakers to their out position.

WARNING: Before servicing, ensure that AC power is removed from the machine and all circuit breakers are disengaged (pulled out). Failure to observe this precaution may cause injury by electrical shock.

CAUTION: Use ESD precautions when handling any of the electronic assemblies. These assemblies contain static-sensitive components.

2.3 Remove all Vitalbus cables from the Vitalbus Hub assembly.

2.4 If any communication cables are attached to the Vitalbus assembly, note the location and remove the cable.

2.5 Remove the Vitalbus Hub mounting hardware (do not disassemble the hinge hardware). Remove the power cord strain relief and swing open the assembly.

2.6 Locate the WPU parallel printer port. If the port has a previously installed Keylok assembly, remove it. See Figure 5.

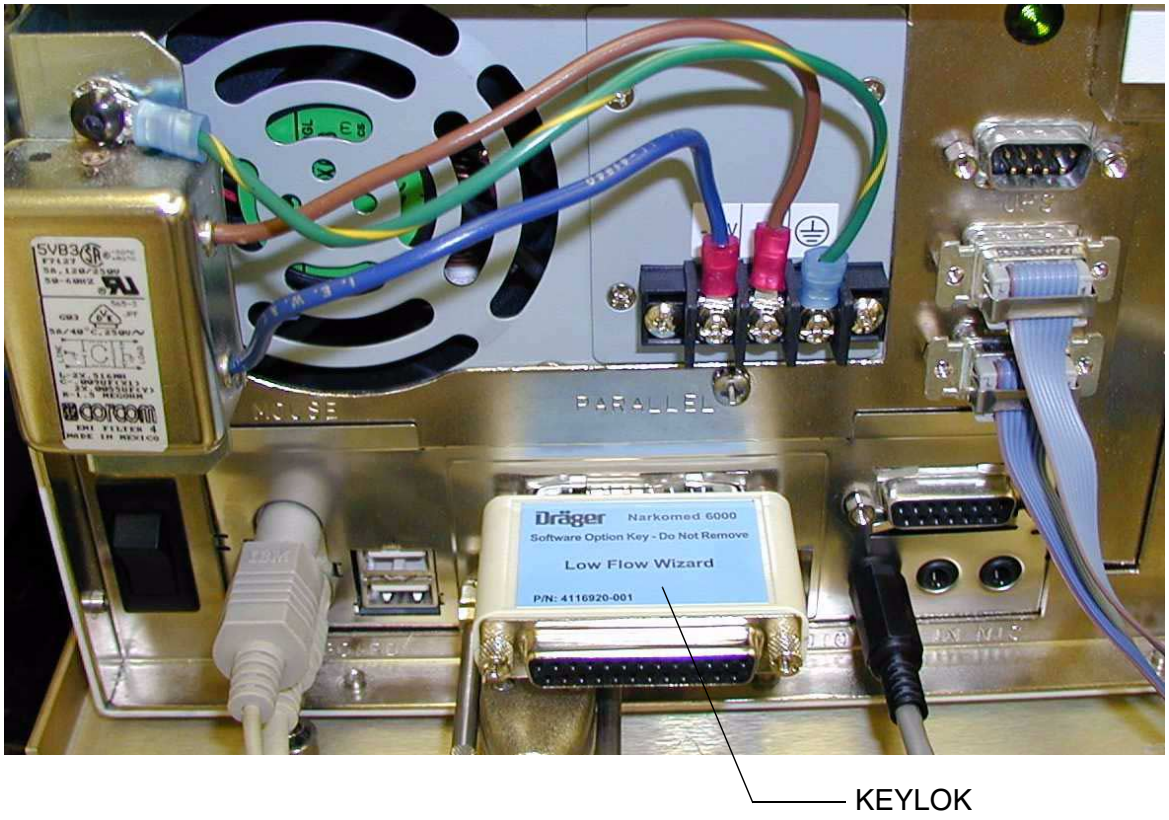

FIGURE 5. Keylok Location

Installation Procedure (continued)

2.7 If an Air-Only Mode Keylok was removed to accommodate this installation, the original Air-Only Mode Keylok P/N 4116920-002 should be returned to DMI and a Keylok Low Flow and Air-Only P/N 4116920-003 should be ordered at no charge. Contact your DMI Customer Service Representative to obtain an RMA and additional information.

WARNING: The Air-Only Mode software option requires the machine to be configured with an Air yoke assembly and fitted with an Air cylinder containing at least 1000 psi.

2.8 Swing the Vitalbus Hub door closed. Reattach the power cord strain relief retainer and reinstall the previously removed hardware.

2.9 Route the power cord strain relief with a loop in a clockwise direction. The retaining clip shall be located 17 inches (5.25 in. diameter) from the cord end, and secured to the Vitalbus Hub door using the mounting hole directly above the power cord socket as shown in Figure 6.

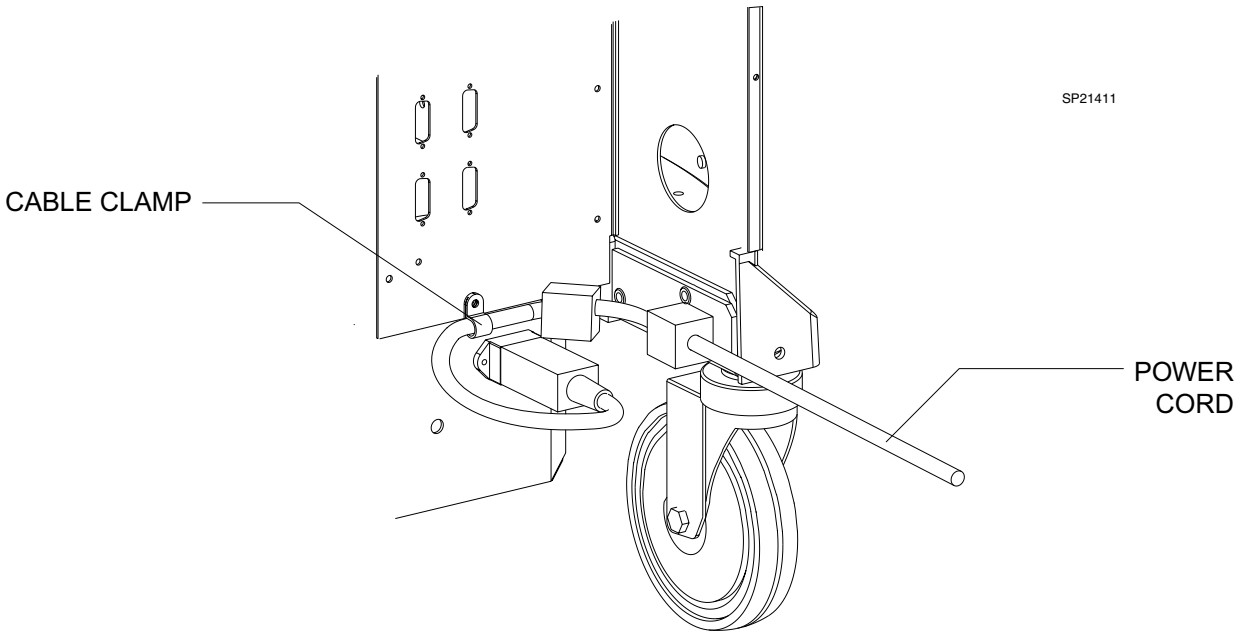

FIGURE 6. Power Cord Routing

Installation Procedure (continued)

2.10 Reinstall the Vitalbus cables previously removed from the Vitalbus Hub assembly.

2.11 Reinstall any communication cables to their original location.

2.12 Restore AC power to the machine and enable the circuit breakers.

2.13 Turn the Sytem Power switch to ON.

2.14 Access the Primary Service screen. (Refer to 'Accessing the Service Screens' in Section 2.1 of the Narkomed 6000 Technical Service Manual.)

2.15 Access the Advanced Service Mode. (Refer to 'Accessing the Service Screens' in Section 2.2 of the Narkomed 6000 Technical Service Manual.) Select Service Config key, NM6K tab, select the SERVICE key and enter your Technician's ID#.

2.16 Touch the Options tab in the NM6000 CONFIGURATION notebook to access the OPTIONS page. Touch the correct key to toggle the corresponding option to Enabled. See Figure 7.

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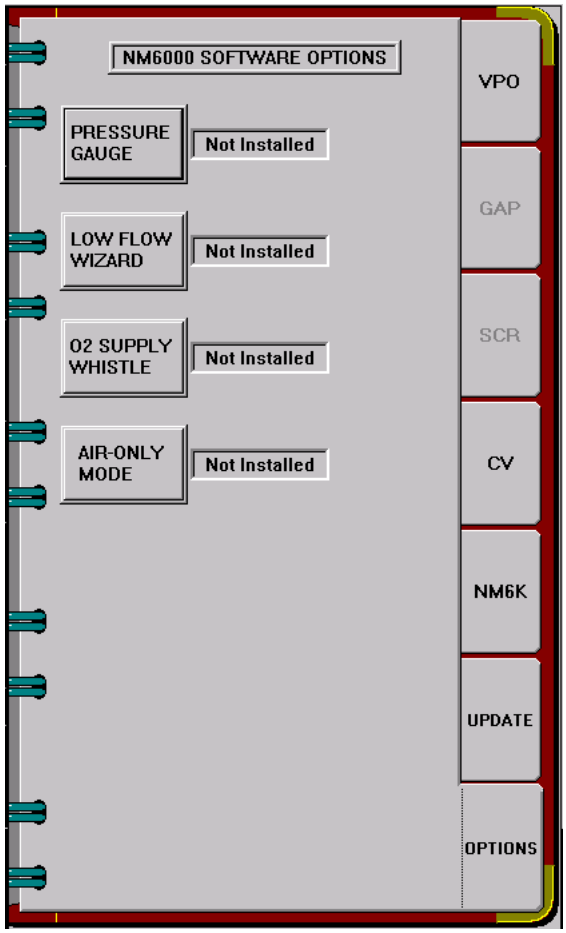

FIGURE 7. Software Options Page

2.17 Touch the LOW FLOW WIZARD key to install this option.

2.18 Touch the Exit Service key, then touch the OK key on the System 1 manager screen.

Installation Procedure (continued)

Testing the Low-Flow Wizard

2.19 Connect a test lung to the Y-piece and set the ventilator to Volume Mode.

2.20 Touch To Secondary Keys on the main screen taskbar.

2.21 Touch the Low Flow Wizard key on the taskbar. Verify that the low flow wizard window shown in Figure 8 appears in the lower right corner of the waveform area.

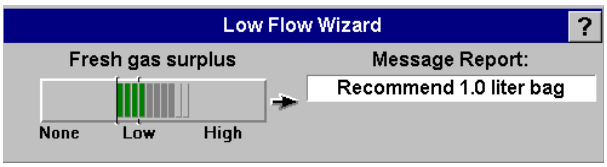

FIGURE 8. Low Flow Wizard Window

2.22 Touch the Low Flow Wizard key again to turn off the low flow wizard.

Testing the Air-Only Option (If Applicable)

2.23 Calibrate the O2 sensor.

2.24 Touch the To Secondary Keys key on the main screen taskbar.

2.25 Touch the Air-Only Mode key, and then touch the Continue key on the Enable Air-Only Mode dialog box.

2.26 Verify that the N2O and minimum O2 flow is disabled and that the O2 low alarm is reduced to 18%.

2.27 Touch the N2O/Air/O2 key. Touch the Continue key on the Enable N2O/Air/O2 dialog, and verify that the N2O, minimum O2 flow, and %O2 low alarms are returned to their previous settings.

Installation Procedure (continued)

Installing the Label:

2.28 Attach the "Low Flow Wizard Enabled" label above the serial number label at the back of the machine where shown in Figure 9.

Updating the Operator's Manual Binder:

2.29 Insert the Low Flow Wizard operator's manual supplement P/N 4116901 in the Operator's Manual binder behind the Operator's Instruction Manual.

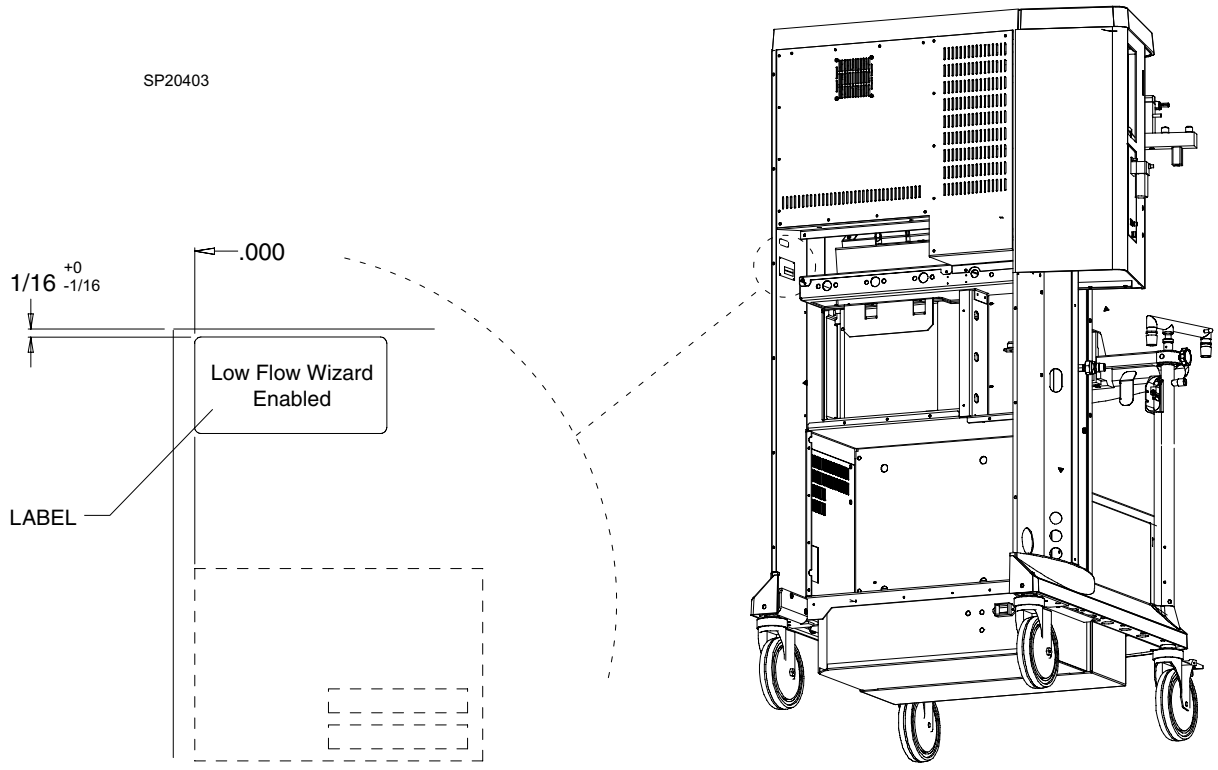

FIGURE 9. Location of Label

RETURN TO SERVICE PROCEDURE TABLE OF CONTENTS
RETURN TO CD-ROM TABLE OF CONTENTS

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